Claims

What is claimed is:

1. A method for inhibiting platelet deposition in a patient in need thereof comprising administering a therapeutically effective amount of a nitric oxide adduct to the patient to inhibit platelet deposition; wherein the nitric oxide adduct is a nitrate which has at least one -O-NO_2 group selected from the group consisting of a polypeptide; an amino acid; a sugar; an oligonucleotide; a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

2. The method of claim 1, wherein the nitrate which has at least one -O-NO_2 group is selected from the group consisting of a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

3. The method of claim 2, wherein the nitrate which has at least one -O-NO_2 group is nitroglycerin.

4. The method of claim 2, wherein the nitrate which has at least one -O-NO_2 group is an angiotensin converting enzyme inhibitor.

5. The method of claim 1, further comprising administering at least one anti-thrombogenic compound or a therapeutic agent.

6. The method of claim 5, wherein the anti-thrombogenic compound is heparin, hirudin, an analog of hirudin, warfarin, aspirin, indomethacin, dipyridamole, prostacyclin, prostaglandin-E, a sulfinpyrazone, a phenothiazine, a RGD peptide, a RDG peptide mimetic, an agent that blocks platelet glycoprotein IIb-IIIa receptors, ticlopidine or clopidogrel.

7. The method of claim 5, wherein the therapeutic agent is a monoclonal antibody, a fragment of recombinant human protein, a viral vector or an anti-sense molecule.

8. A method for alleviating restenosis in a patient in need thereof comprising administering a therapeutically effective amount of a nitric oxide adduct to the patient to alleviate restenosis; wherein the nitric oxide adduct is a nitrate which has at least one -O-NO_2 group selected from the group consisting of a polypeptide; an amino acid; a

sugar; an oligonucleotide; a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

9. The method of claim 8, wherein the nitrate which has at least one -O-NO_2 group is selected from the group consisting of a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

10. The method of claim 9, wherein the nitrate which has at least one -O-NO_2 group is nitroglycerin.

11. The method of claim 9, wherein the nitrate which has at least one -O-NO_2 group is an angiotensin converting enzyme inhibitor.

12. The method of claim 8, further comprising administering at least one anti-thrombogenic compound or a therapeutic agent.

13. The method of claim 12, wherein the anti-thrombogenic compound is heparin, hirudin, an analog of hirudin, warfarin, aspirin, indomethacin, dipyridamole, prostacyclin, prostaglandin-E, a sulfinpyrazone, a phenothiazine, a RGD peptide, a RDG peptide mimetic, an agent that blocks platelet glycoprotein IIb-IIIa receptors, ticlopidine or clopidogrel.

14. The method of claim 12, wherein the therapeutic agent is a monoclonal antibody, a fragment of recombinant human protein, a viral vector or an anti-sense molecule.

15. A method for treating a vascular complication caused by platelet deposition or thrombus formation in a patient in need thereof comprising administering a therapeutically effective amount of a nitric oxide adduct to the patient to treat the vascular complication caused by platelet deposition or thrombus formation; wherein the vascular complication caused by platelet deposition or thrombus formation is myocardial infarction, thrombophlebitis, thrombocytopenia or bleeding disorder; wherein the nitric oxide adduct is a nitrate which has at least one -O-NO_2 group selected from the group consisting of a polypeptide; an amino acid; a sugar; an oligonucleotide; a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

16. The method of claim 15, wherein the nitrate which has at least one -O-NO_2 group is selected from the group consisting of a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

17. The method of claim 16, wherein the nitrate which has at least one -O-NO_2 group is nitroglycerin.

18. The method of claim 16, wherein the nitrate which has at least one -O-NO_2 group is an angiotensin converting enzyme inhibitor.

19. The method of claim 15, further comprising administering at least one anti-thrombogenic compound or a therapeutic agent.

20. The method of claim 19, wherein the anti-thrombogenic compound is heparin, hirudin, an analog of hirudin, warfarin, aspirin, indomethacin, dipyridamole, prostacyclin, prostaglandin-E, a sulfinpyrazone, a phenothiazine, a RGD peptide, a RDG peptide mimetic, an agent that blocks platelet glycoprotein IIb-IIIa receptors, ticlopidine or clopidogrel.

21. The method of claim 20, wherein the therapeutic agent is a monoclonal antibody, a fragment of recombinant human protein, a viral vector or an anti-sense molecule.

22. A method for inhibiting platelet deposition, platelet adhesion or thrombus formation in a patient in need thereof comprising administering a therapeutically effective amount of a nitric oxide adduct to the patient to treat a myocardial infarction, thrombophlebitis, thrombocytopenia or a bleeding disorder caused by the platelet deposition, platelet adhesion or the thrombus formation; wherein the nitric oxide adduct is a nitrate which has at least one -O-NO_2 group selected from the group consisting of a polypeptide; an amino acid; a sugar; an oligonucleotide; a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

23. The method of claim 22, wherein the nitrate which has at least one -O-NO_2 group is selected from the group consisting of a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

24. The method of claim 23, wherein the nitrate which has at least one -O-NO_2 group is nitroglycerin.

25. The method of claim 23, wherein the nitrate which has at least one -O-NO_2 group is an angiotensin converting enzyme inhibitor.

26. The method of claim 22, further comprising administering at least one anti-thrombogenic compound or a therapeutic agent.

27. The method of claim 26, wherein the anti-thrombogenic compound is heparin, hirudin, an analog of hirudin, warfarin, aspirin, indomethacin, dipyridamole, prostacyclin, prostaglandin-E, a sulfinpyrazone, a phenothiazine, a RGD peptide, a RDG peptide mimetic, an agent that blocks platelet glycoprotein IIb-IIIa receptors, ticlopidine or clopidogrel.

28. The method of claim 26, wherein the therapeutic agent is a monoclonal antibody, a fragment of recombinant human protein, a viral vector or an anti-sense molecule.

29. A method for treating a dysfunction in the endothelium of a patient comprising administering a therapeutically effective amount of a nitric oxide adduct to the patient wherein the nitric oxide adduct is a nitrate which has at least one -O-NO_2 group selected from the group consisting of a polypeptide; an amino acid; a sugar; an oligonucleotide; a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

30. The method of claim 29, wherein the nitrate which has at least one -O-NO_2 group is selected from the group consisting of a branched or unbranched, saturated or unsaturated aliphatic hydrocarbon; an aromatic hydrocarbon; or a heterocyclic compound.

31. The method of claim 30, wherein the nitrate which has at least one -O-NO_2 group is nitroglycerin.

32. The method of claim 30, wherein the nitrate which has at least one -O-NO_2 group is an angiotensin converting enzyme inhibitor.

33. The method of claim 29, further comprising administering at least one anti-thrombogenic compound or a therapeutic agent.

34. The method of claim 33, wherein the anti-thrombogenic compound is heparin, hirudin, an analog of hirudin, warfarin, aspirin, indomethacin, dipyridamole, prostacyclin, prostaglandin-E, a sulfinpyrazone, a phenothiazine, a RGD peptide, a RDG peptide mimetic, an agent that blocks platelet glycoprotein IIb-IIIa receptors, ticlopidine or clopidogrel.

35. The method of claim 33, wherein the therapeutic agent is a monoclonal antibody, a fragment of recombinant human protein, a viral vector or an anti-sense molecule.